

REMARKS

The Final Office Action mailed November 23, 2007, has been received and reviewed. Claims 1, 4-9, 13, 15, and 18-22 are pending in the subject application. All claims stand rejected. It is proposed that each of claims 1, 6-9, 15, and 20 be amended as set forth herein. As such, upon entry of the proposed amendments, claims 1, 4-9, 13, 15, and 18-22 will remain pending. It is submitted that no new matter has been added by way of the present amendments. Claims 1, 4-6, 9, 13, 15, and 18-22 stand rejected under 35 U.S.C. § 102(b), while claims 7 and 8 stand rejected under 35 U.S.C. § 103(a). Reconsideration of the subject application is respectfully requested in view of the proposed amendments and the following remarks.

Support for Claim Amendments

It is proposed that each of independent claims 1, 9, and 15 be amended as set forth herein to clarify a process executed by the secure password prompt routine for generating a authentication graphic. Support for these claim amendments may be found in the Specification, for example, at paragraphs [0016], [0022], [0024], and [0028]. It is proposed that each of claims 6, 9, and 20 be amended as set forth herein to clarify a process for generating a digest. Support for these claim amendments may be found in the Specification, for example, at paragraphs [0017], [0018], [0023], and [0029].

Objections

Claims 7 and 8 stand objected to for the informality of depending on cancelled claim 3. In response, claims 7 and 8 are amended to depend from independent claim 1, which is currently pending in the present application.

Rejections based on 35 U.S.C. § 102(b)

A.) Applicable Authority

Anticipation “requires that the same invention, including each element and limitation of the claims, was known or used by others before it was invented by the patentee.”¹ “[P]rior knowledge by others requires that all of the elements and limitations of the claimed subject matter must be expressly or inherently described in a single prior art reference.”² “The single reference must describe and enable the claimed invention, including all claim limitations, with sufficient clarity and detail to establish that the subject matter already existed in the prior art and that its existence was recognized by persons of ordinary skill in the field of the invention.”³

B.) Anticipation Rejection Based on U.S. App. No. 2002/0196237 to Fernando et al.

Claims 1, 4-6, 9, 13, 15 and 18-22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Application No. 2002/0196237 to Fernando et al. (hereinafter the “Fernando reference”). As the Fernando reference does not describe, either expressly or inherently, each and every element of claims 1, 4-6, 9, 13, 15 and 18-22, Applicant respectfully traverses the rejection of these claims, as hereinafter set forth.

Independent claim 1, as amended hereinabove, recites a method performed by a client for storing a secret in a secure storage, receiving a password challenge from a server, and, responsive to the password challenge, calling a secure password prompt routine. In particular, the secure password prompt routine is employed to execute a procedure that includes, in part,

¹ MPEP § 2131, *passim*; *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 299, 302 (Fed. Cir. 1995).

² *Elan Pharms., Inc. v. Mayo Foundation for Medical Educ. & Research*, 304 F.2d 1221, 1227 (Fed. Cir. 2002) (citing *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999); *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)).

“(1) accessing the secret in the secure storage,” “(2) generating an authentication graphic based on the secret,” and “(3) rendering a prompt at a display device,” where “*the prompt including a request for a user to input a password and the authentication graphic*” (emphasis added). In this way, the secure password prompt routine renders a prompt on a display device that self-indicates its authenticity when requesting a password entry. Similarly, claims 9 and 15 recite the secure password prompt routine that executes a procedure that includes, in part, “rendering a prompt” where the prompt includes “a request for a user to input a password and the authentication graphic.”

The Fernando reference, on the other hand, displays a secure icon on a display 37 that is separate from the display 39, where the virtual PIN pad is displayed for inputting a password.⁴ That is, the “visible security indicator is not part of the main display 39 of a touchscreen incorporating the touchpad 1 but is a separate display 37 under difference control than the main display 39.”⁵ Disadvantageously, the cited reference requires additional equipment (e.g., at least two displays and two controllers), and necessitates that a user look in different places (e.g., display 37 and display 39 of FIG. 3). Accordingly, it is likely that the user may overlook a separate display screen and input a PIN when the payment device is unsecured.

Moreover, the independent claims recite that the authentication graphic is displayed responsive to a password challenge being sent from a server, which is external to the client device. In contrast, the Fernando reference displays the secure icon in response to an indication from a user to perform a financial transaction.⁶ Accordingly, the Fernando reference

³ *Id.* (emphasis added)(citing *Crown Operations Int’l, Ltd. v. Solutia Inc.*, 289 F.3d 1367, 1375 (Fed. Cir. 2002); *In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990)). *See also*, *PPG Indus., Inc. v. Guardian Indus. Corp.*, 75 F.3d 1558, 1566 (Fed. Cir. 1996).

⁴ *See Fernando reference* at pg. 2, ¶ [0030].

⁵ *Id.* at pg. 2, ¶ [0037].

⁶ *Id.* at pg. 2, ¶ [0029]-[0030].

does not anticipate (a) triggering generation of a authentication graphic at a client device (b) upon receiving a password challenge (c) from a server.

As such, for at least the reasons stated above, the Applicant suggests that claims 1, 9, and 15 are not anticipated by Fernando and are in condition for allowance. Each of claims 4-6, 13, and 18-22 is believed to be in condition for allowance based, in part, upon their dependency from claims 1, 9, and 15, respectively, and such favorable action is respectfully requested.⁷

Further, independent claim 9, as amended herein, recites a hash function embodied on the communications device to calculate a digest. In particular, calculating the digest includes, in part, “(1) receiving a password in response to the received password challenge, wherein the password is received upon the user identifying the authentication graphic as authentic,” “(2) *altering the password* such that, if the digest is captured by an attacker, the attacker is unable to recreate the password,” and “ (3) *calculating the digest from the password challenge and the altered password*” (emphasis added). In this way, the password is protected against interception while the server, which receives the digest is able to recognize the password as being valid or not. Similarly, claim 6 recites “*generating a digest with a cryptographically-safe function that includes indicia of the received password and the received password challenge*, wherein the digest is a communication that *securely protects the password from being intercepted*,” and “sending the digest to the server, wherein the *server verifies the digest by comparing it to a recalculated digest* that includes an indicia of the password challenge and a stored authentic password” (emphasis added). Along these lines, claim 20 recites “receiving the password from the user,” “*altering the received password utilizing a hash function*” “generating

⁷See 37 C.F.R. § 1.75(c) (2006).

a digest using the altered password and the received password challenge,” and “sending the digest to the server without directly passing the password over a communications medium” (emphasis added).

Dissimilarly, the Fernando reference encrypts the PIN upon entry. This is distinct from generating a digest based on (a) an altered password and (b) a password challenge. Accordingly, for at least the reasons stated above, the Applicant suggests that claims 6, 9, and 20 are not anticipated by Fernando and are in condition for allowance.

Rejections based on 35 U.S.C. § 103(a)

A.) Applicable Authority

Title 35 U.S.C. § 103(a) declares, a patent shall not issue when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” The Supreme Court in Graham v. John Deere counseled that an obviousness determination is made by identifying: the scope and content of the prior art; the level of ordinary skill in the prior art; the differences between the claimed invention and prior art references; and secondary considerations.⁸ To support a finding of obviousness, the initial burden is on the Office to apply the framework outlined in Graham and to provide some reason, suggestion, or motivation, found either in the prior art references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the prior art reference or to combine prior art reference teachings to produce the claimed invention.⁹ Recently, the Supreme Court elaborated, at pages 13-14 of the *KSR* opinion, that “it

⁸ *Graham v. John Deere Co.*, 383 U.S. 1 (1966).

⁹ *See, Application of Bergel*, 292 F. 2d 955, 956-957 (1961).

will be necessary for [the Office] to look at interrelated teachings of multiple [prior art references]; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by [one of] ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the [patent application].”¹⁰

B.) Obviousness Rejection Based upon the Fernando reference in view of U.S. Patent No. 6,950,949 to Gilchrist

Claims 7 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Fernando reference in view of U.S. Patent No. 6,950,949 to Gilchrist (hereinafter the “Gilchrist reference”). As the Fernando reference and the Gilchrist reference, whether taken alone or in combination, fail to teach or suggest all of the limitations of the rejected claims, the Applicant respectfully traverses this rejection, as hereinafter set forth.

As discussed above, the Fernando reference does not teach or suggest all of the features of independent claim 1 (as amended herein) either directly or indirectly. It is respectfully submitted that the Gilchrist reference fails to cure at least the above-discussed deficiencies of the Fernando reference. More particularly, with respect to independent claim 1, it is respectfully submitted that the Gilchrist reference fails to teach or suggest displaying a prompt having both a request for password entry and an authentication graphic generated from a secret stored in a secure storage. Rather, the Gilchrist reference is cited for disclosing a method of receiving user input to select a secret. Accordingly, it is respectfully submitted that the Fernando

¹⁰ *KSR v. Teleflex*, No. 04-1350, 127 S.Ct. 1727 (2007).

and Gilchrist references, whether taken alone or in combination, fail to teach or suggest all of the features of the claim 1 and, accordingly, of claims 7 and 8.¹¹

¹¹ See 37 C.F.R. § 1.75(c) (2006).

CONCLUSION

For at least the reasons stated above, upon entry of the proposed amendments, it is believed that claims 1, 4-9, 13, 15, and 18-22 will be in condition for allowance. As such, Applicants respectfully request entry of the proposed amendments, withdrawal of the pending rejections and allowance of the claims. If any issues remain that would prevent issuance of this application, the Examiner is urged to contact the undersigned – 816-474-6550 or btabor@shb.com (such communication via email is herein expressly granted) – to resolve the same. It is believed that no fee is due, however, the Commissioner is hereby authorized to charge any amount required to Deposit Account No. 19-2112, referencing attorney docket number MFCP.140192.

Respectfully submitted,

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